REMARKS

Claims 1 and 4-12 are pending. By this amendment, claim 1 has been cancelled without prejudice to or disclaimer of the underlying subject matter. Claims 2-3 and 13-17 were cancelled without prejudice to or disclaimer of the underlying subject matter in an amendment after final rejection filed July 2, 2002. No new matter enters by way of this amendment.

1. Restriction/Election

Applicants acknowledge the finality of the restriction requirement but maintain their traversal.

2. Specification – Browser Executable Code

Applicants acknowledge and thank the Examiner's withdrawal of the objection to the specification.

3. Claim Rejections – 35 U.S.C. § 101

Claims 1 and 4-12 were rejected under 35 U.S.C. § 101, because the claimed invention is allegedly not "supported by either a specific and/or substantial utility or a well-established utility." Final Action at page 3. Applicants respectfully traverse this rejection. The pending claims are directed to (a) nucleic acid molecules, (b) transformed plants, and (c) methods for determining a level or pattern of a protein in a plant, each of which has multiple independent utilities.

The Examiner acknowledges that the specification describes multiple utilities for the nucleic acid molecules, including "probes for assisting in the isolation of full-length

cDNAs or genes which would be used to make protein and optionally further usage to make the corresponding antibodies, gene mapping, isolation of homologous sequences, detection of gene expression such as in Northern blot analysis, molecular weight markers, chromosomal markers, and for numerous other generic genetic engineering usages." *Final Action* at page 4. However, despite this admission and numerous additional uses cited throughout the specification, the Examiner contends that none of these utilities constitutes a "specific" or "substantial" utility. *Id.* at pages 3-4. Applicants respectfully disagree, however, to facilitate prosecution, claim 1 has been cancelled without prejudice to or disclaimer of the underlying subject matter.

The Examiner further argues that "[b]ecause there is no specific utility for a nucleic acid comprising SEQ ID NO: 1," the claimed plants and methods comprising a nucleic acid sequence comprising SEQ ID NO: 1 also lack utility. Applicants respectfully disagree. Claims must be considered as a whole in determining compliance with § 101. *Diamond v. Diehr*, 450 U.S. 175, 188, 209 U.S.P.Q. 1, 9 (1981). It is inappropriate to dissect claims and consider some elements while ignoring others. *Id.* Further, it is well-established law that "when a properly claimed invention meets at least one stated objective, utility under section 101 is clearly shown." *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 958, 220 U.S.P.Q. 592, 598 (Fed. Cir. 1983). Applicants respectfully submit that the utility of the claimed plants and methods can not be based solely on the utility of the nucleic acid molecules, but must be based on the claimed subject matter as a whole. The Examiner's apparent assertion that the patentability of the claims is based on the utility of SEQ ID NO:1 alone is improper.

The claimed plants and methods exhibit the requisite utility quite apart from the utilities of the nucleic acid sequence. For example, the transformed plants having, *inter alia*, a structural nucleic acid molecule comprising a nucleic acid sequence of SEQ ID NO:1 or complement thereof, have utility independent of whether a function is known for the nucleic acid sequence. The specification discloses methods for the preparation of the transgenic plants as well as use in breeding programs to produce plants having genes of interest. *See, e.g.*, specification at page 18, lines 18-19 and page 56, line 15 through page 75, line 10. The specification further describes that the nucleic acid sequences can be used as markers. *See, e.g.*, specification at page 48, line 22 through page 49, line 5. The skilled artisan would recognize that such transformed plants can be more easily followed through a breeding program by the detection of the nucleic acid molecule. These utilities are immediately apparent for the claimed plants and methods without the need for further research.

Moreover, the claimed methods find use in determining the level or pattern of a protein in a plant tissue or cell. Specification at page 44, line 20 through page 48, line 21. For example, such methods can be used to assay gene expression in plant cells treated with an herbicide to detect target genes for producing herbicide tolerant plants. As such, the claimed methods also have a legally sufficient utility.

In view of the above, Applicants contend that the claimed plants and methods are supported by credible, specific, and substantial utilities disclosed in the specification. Moreover, the Examiner has failed to raise any credible evidence challenging the presently asserted utilities. An invention need only provide one identifiable benefit to satisfy 35 U.S.C. § 101. Because Applicants need only establish a single utility to satisfy

35 U.S.C. § 101, and have done so in the present case, the rejection under 35 U.S.C. § 101 is improper. Reconsideration and withdrawal of the rejection of claims 4-12 is respectfully requested.

4. Claim Rejections – 35 U.S.C. § 112, first paragraph, enablement

Claims 1 and 4-12 were rejected under 35 U.S.C. § 112, first paragraph, as not being enabled by the specification, because the claimed invention allegedly lacks utility (*i.e.*, an invention with no utility cannot be enabled). Applicants respectfully traverse this rejection and note that this rejection has been overcome by the foregoing arguments regarding utility. Thus, the specification teaches a person of ordinary skill to make and use the claimed transformed plants and methods. Accordingly, the enablement rejection under 35 U.S.C. § 112, first paragraph, is improper. Reconsideration and withdrawal are respectfully requested.

5. Claim Rejections – 35 U.S.C. § 112, 1st Paragraph, Written Description

The Examiner has rejected claims 1 and 4-12 under 35 U.S.C. § 112, first paragraph, for allegedly lacking an adequate written description. Final Action at pages 5-9. Applicants respectfully disagree.

The Examiner acknowledges that "SEQ ID NO: 1 meets the written description provisions of 35 USC 112, first paragraph." Final Action at page 6. However, the Examiner argues that "SEQ ID NO: 1 is a partial sequence, and the proper open reading frame has not been disclosed." *Id.* In addition, the Examiner argues that the claimed subject matter is "directed to encompass full length gene sequences (ie gene sequences

yet to be discovered) and cDNAs comprising SEQ ID NO:1, sequences that hybridize to SEQ ID NO: 1, and so forth, as well as plants comprising said sequences and methods which utilize said sequences." *Id.* The Examiner concludes that "[n]one of these sequences meet the written description provision of 35 USC 112, first paragraph." *Id.* Applicants respectfully disagree. however, to facilitate prosecution, claim 1 has been cancelled without prejudice to or disclaimer of the underlying subject matter and respond to the rejection only as it applies to pending claims 4-12.

"A description as filed is presumed to be adequate, unless and until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption." *Federal Register* 66(4):1107, Written Description Guidelines (2001). The Examiner is required to disclose "express findings of fact which support the lack of written description conclusion." *Id.* In the present case, the Examiner presents no findings of fact to rebut the presumption that the written description in the specification is adequate. The only fact alleged by the Examiner in support of the written description rejection is that the claims encompass a sequence that is less than a full-length cDNA, and thus the sequences do not meet the written description requirement. Final Action at pages 6-7. Whether the nucleic acid molecule is a full-length cDNA is irrelevant to the question of whether plants transformed with, and methods using, nucleic acid molecules comprising the nucleic acid sequence of SEQ ID NO: 1 are sufficiently described by the present specification.

The purpose of the written description requirement is to ensure that the inventor had possession of the claimed subject matter, *i.e.*, to ensure that the inventor actually

invented what is claimed. *Gentry Gallery Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479, 45 U.S.P.Q.2d 1498, 1503 (Fed. Cir. 1998); *Lockwood v. American Airlines*, 107 F.3d 1565, 1572, 41 U.S.P.Q.2d 1961, 1966 (Fed. Cir. 1997); *In re Alton*, 76 F.3d 1168, 1172, 37 U.S.P.Q.2d 1578, 1581 (Fed. Cir. 1996). If a person of ordinary skill in the art would, after reading the specification, understand that the inventor had possession of the claimed invention, even if not every nuance, then the written description has been met. *In re Alton*, 76 F.3d at 1175, 37 U.S.P.Q.2d at 1584.

A person of ordinary skill in the art would, after reading the present specification, understand that Applicants had possession of plants transformed with nucleic acid molecules comprising SEQ ID NO:1, and methods incorporating nucleic acid molecules comprising SEQ ID NO:1 and therefore, possession of the claimed invention. Claims "may be broader than the specific embodiment disclosed in a specification." *Ralston Purina Co. v. Far-mor-Co*, 772 F.2d 1570, 1575, 227 U.S.P.Q. 177, 179 (Fed. Cir. 1985) (*quoting In re Rasmussen*, 650 F.2d 1212, 1215, 211 U.S.P.Q. 323, 326 (CCPA. 1981)). Thus, simply because the claims at issue are intended to cover transformed plants having and methods using nucleic acid molecules that include the recited sequence joined with additional sequences does not mean that Applicants were any less in possession of the claimed nucleic acid molecules.

Indeed, the specification describes the transformation of plants with vectors having the claimed nucleic acid molecules (*See, e.g.*, specification at page 66, line 12 through page 75, line 10) as well as methods for determining gene expression (*See, e.g.*, specification at page 15, lines 3-16 and page 47, line 8 through page 50, line 15).

Moreover, the present application describes more than just the nucleotide sequence used in the claims (SEQ ID NO: 1). For example, it describes vectors comprising the nucleic acid molecules, Specification at page 56, line 15 through page 66, line 11, and describes how to make the nucleotide sequences and the libraries from which they were originally purified. *See* specification at page 1, line 16 through page 4, line 23, and Examples 1-2. As such, the specification provides sufficient written description of the claimed transformed plants and methods.

In light of the detailed disclosure of the present application, one skilled in the art, after reading the present specification, would clearly know if a transformed plant or method contained the recited nucleotide sequences. Thus, pending claims 4-12 are supported by an adequate written description pursuant to the requirements of 35 U.S.C. § 112, and the rejection should be reversed. Reconsideration and withdrawal are respectfully requested.

Conclusion

In view of the foregoing remarks, Applicants respectfully submit that the present application is now in condition for allowance, and notice of such is respectfully requested. The Examiner is encouraged to contact the undersigned at (202) 942-5085 should any additional information be necessary for allowance.

Respectfully submitted,

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